



Day : Wednesday
Date: 7/21/2004
Time: 13:31:46

Inventor Name Search Result

Your Search was:

Last Name = SOMMERFELD

First Name = PAUL

Application#	Patent#	Status	Date Filed	Title	Inventor Name 2
29118291	Not Issued	161	02/07/2000	AIR GAP CLEANING TOOL	SOMMERFELD, PAUL A.
10045784	Not Issued	030	01/10/2002	AIR GAP CLEANING TOOL	SOMMERFELD, PAUL A.

Inventor Search Completed: No Records to Display.

Search Another:
Inventor

Last Name	First Name
<input type="text" value="sommerfeld"/>	<input type="text" value="paul"/>
<input type="button" value="Search"/>	

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DATE: Wednesday, July 21, 2004

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<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L5	(15/104.2 or 15/206 or 15/106 or 15/164 or 134/8).ccls. and (air gap)	4
<input type="checkbox"/>	L4	L2 and (dishwasher)	3
<input type="checkbox"/>	L3	L2 and (plumbing fixture)	2
<input type="checkbox"/>	L2	L1 and cleaning	878
<input type="checkbox"/>	L1	(air gap) and brush	5752

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Search Results - Record(s) 1 through 4 of 4 returned.

1. Document ID: US 20030127109 A1

Using default format because multiple data bases are involved.

L5: Entry 1 of 4

File: PGPB

Jul 10, 2003

PGPUB-DOCUMENT-NUMBER: 20030127109

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030127109 A1

TITLE: Air gap cleaning tool

PUBLICATION-DATE: July 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sommerfeld, Paul A. SR.	Baltimore	MD	US	

US-CL-CURRENT: 134/8; 15/104.2, 15/106, 15/164

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KINIC](#) | [Drawn](#) | [De](#)

2. Document ID: US 6671919 B2

L5: Entry 2 of 4

File: USPT

Jan 6, 2004

US-PAT-NO: 6671919

DOCUMENT-IDENTIFIER: US 6671919 B2

TITLE: "Air cushion effect" soft oral care brush

DATE-ISSUED: January 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Davis; Colin G.	Kaneohe	HI	96744	

US-CL-CURRENT: 15/167.1; 15/106, 15/145, 15/176.1, 601/141

ABSTRACT:

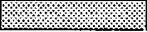
A oral care brush device is described for use primarily for massaging and stimulation of sensitive gums and teeth. The brush head is hollow but closed at one end, and is made of a shape-retaining but soft and resilient material. One end of

the brush handle is inserted into the hollow handle and is configured to substantially seal the open end of the head and trap air inside, the trapped air providing an air cushion effect. The air cushion effect and the soft head allow use of the device for effective and thorough cleaning, massage and stimulation of the gums and teeth notwithstanding the user's tooth or gum sensitivity.

15 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) |  |  | [Claims](#) | [KUMC](#) | [Drawn D](#)

3. Document ID: US 6537817 B1

L5: Entry 3 of 4

File: USPT

Mar 25, 2003

US-PAT-NO: 6537817

DOCUMENT-IDENTIFIER: US 6537817 B1

TITLE: Piezoelectric-drop-on-demand technology

DATE-ISSUED: March 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papen, Roeland F.	Guilford	CT		

US-CL-CURRENT: 436/49; 134/22.11, 134/7, 134/8, 239/106, 239/116

ABSTRACT:

A method and apparatus for cleaning the interior of capillary tubes used to dispense 1 to 100 micron diameter liquid droplets by a piezoelectric transducer surrounding each capillary tube. Magnetic particles are aspirated into the capillary tubes and moved by an exterior magnet to cause deposits on the interior walls to be dislodged and subsequently discharged from the capillary tube. In a preferred embodiment, the magnetic particles are coated with a material capable of binding such deposits, e.g., DNA, RNA, and the like.

9 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) |  |  | [Claims](#) | [KUMC](#) | [Drawn D](#)

4. Document ID: US 5868858 A

L5: Entry 4 of 4

File: USPT

Feb 9, 1999

US-PAT-NO: 5868858

DOCUMENT-IDENTIFIER: US 5868858 A

h e b b g e e e f e ef b e

TITLE: Method and apparatus for cleaning heating air conditioning and ventilating ducts

DATE-ISSUED: February 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Creed; Bruce W.	Swartz Creek	MI	48473	

US-CL-CURRENT: 134/8; 134/21, 134/22.12, 134/24, 15/345, 15/395

ABSTRACT:

Method and apparatus for cleaning a heating, ventilating and air conditioning duct comprising a high pressure air emitting nozzle which is disposable inside the duct and an expansible and contractible draught member, which is responsive to differential pressure being created on opposite sides thereof, for drawing the high pressure air emitting member in a downstream path of travel through the duct. The draught member includes a sheet of fabric which is coupled, at its perimetrical edge portion via a plurality of lines, to the high pressure air emitting nozzle. The perimetrical edge of the fabric sheet, in its expanded condition, is spaced from a confronting portion of the duct via a low pressure, high velocity air zone which causes the draught member to move in a to-and-fro transverse path as it is moved downstream. A strip of abrasive material is provided along the perimeter of the draught member for wiping the inside of the duct as it moves to-and-fro downstream. The dislodged dirt is entrained in the high velocity air stream and is moved downstream.

39 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KUMC](#) | [Drawn D](#)

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Term	Documents
"15/104.2"	498
15/104.2S	0
15/206	536
15/206S	0
15/106	663
15/106S	0
15/164	333
15/164S	0
134/8	648
134/8S	0

AIR	3196927
((15/104.2 OR 15/206 OR 15/106 OR 15/164 OR 134/8).CCLS. AND (AIR GAP)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

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L3: Entry 2 of 2

File: DWPI

Jul 10, 2003

DERWENT-ACC-NO: 2003-568580

DERWENT-WEEK: 200353

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TITLE: Cleaning method for air gap in plumbing fixture, involves fully inserting cleaning brush into hose connected to cylindrical fitting until bristles of brush exit drain opening

INVENTOR: SOMMERFELD, P A

PRIORITY-DATA: 2002US-0045784 (January 10, 2002)

[Search Selected](#) [Search All](#) [Clear](#)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> <u>US 20030127109 A1</u>	July 10, 2003		010	A46B003/18

INT-CL (IPC): A46 B 3/18; B08 B 1/00

ABSTRACTED-PUB-NO: US20030127109A

BASIC-ABSTRACT:

NOVELTY - The method involves fully inserting a cleaning brush into a hose connected to a cylindrical fitting (22) until the bristles (30) of the brush exit the drain opening, after introducing the cleaning brush into the space between the cylindrical fitting and the center tube. The cap is replaced on a counter top access, after the full insertion of the brush into the hose.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a cleaning brush.

USE - Used for cleaning air gap in the plumbing fixture.

ADVANTAGE - Ensures proper operation of the plumbing fixture since air gap is reliably cleaned.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the first end of the cleaning brush having bristles introduced into the space between the cylindrical fitting and the center tube.

Cylindrical fitting 22

Bristles 30

ABSTRACTED-PUB-NO: US20030127109A

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EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg. 8/13

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1. Document ID: US 20030127109 A1

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L3: Entry 1 of 2

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[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KUMC](#) | [Drawn Ds](#)

2. Document ID: US 20030127109 A1

L3: Entry 2 of 2

File: DWPI

Jul 10, 2003

DERWENT-ACC-NO: 2003-568580

DERWENT-WEEK: 200353

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<u>US 20030127109 A1</u>	July 10, 2003		010	A46B003/18

INT-CL (IPC): A46 B 3/18; B08 B 1/00

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Term	Documents
PLUMBING	28201
PLUMBINGS	12
Fixture	176111
Fixtures	66930
(2 AND (PLUMBING ADJ Fixture)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	2
(L2 AND (PLUMBING Fixture)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	2

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-	484	(134/8).CCLS.	USPAT; US-PGPUB	2004/05/26 12:46
-	194	134/8.ccls. and (air gap)	USPAT; US-PGPUB	2004/07/21 11:43
-	170	(134/8.ccls. and (air gap)) and cleaning	USPAT; US-PGPUB	2004/07/21 11:09
-	61	(134/8.ccls. and (air gap)) and cleaning and brush	USPAT; US-PGPUB	2004/07/21 11:19
-	1	(15/104.2,206).ccls. and (((air-gap) or (air adj1 gap)) and brush)	USPAT; US-PGPUB	2004/07/21 11:22